



DATE: October 15, 2004

DOCKET: RSPA-04-18730

Re: Submission of Comments from
Arkema Inc. (formally Atofina Chemicals, Inc.)

TITLE: **Hazardous Materials:** Enhancing Rail Transportation Security for Toxic Inhalation Hazard Materials.

FROM: Martin Thomas on behalf of Arkema Inc.

SECURITY PLANS:

DOT & DHS are interested in determining how the current security plans might be improved as they relate to TIH materials. They are considering specific criteria for these security plans to adequately address the security risks to TIH materials. RSPA is considering revising its security plan rule to incorporate the DHS criteria for TIH materials and establish a process by which DHS would review the security plans of TIH transporters and shippers. In this notice, they are seeking information from shippers and carriers concerning the process by which their security plans were developed, including any problems encountered during either the drafting or implementation phase, recommended "best practices," and any additional guidance or assistance that may be appropriate.

Please provide your comments to the following questions:

1. Should DOT/DHS work with the industry to develop model security plans or "best practices" for shippers and transporters of TIH materials? **YES - DOT has worked with industry and has solicited comments for changes that have the potential to impact industry. This past relationship has contributed to the rail industry having a safety record that presently is superb. DOT/DHS should continue this relationship.**
2. Can the methodology you utilized to develop your plants security plan as it relates to transporting TIH materials be applied generally to some or all shipments of TIH materials? Are there specific measures you have implemented that you would recommend for other shippers/carriers of TIH materials? **The methodology used to develop plant security plans are designed for movement of rail shipments inside fixed boundaries. The expansiveness of rail routes makes it more difficult to plan for the same secure methods. The**

only recommendation is to have the shippers/carriers secure information regarding shipments and control access to rail yards through the use of roving patrols and better lighting.

3. Does your plants security plan include “layered” measures that are tied to specific threat levels? How are these implemented? What difficulties have you experienced in developing such “layered” measures? Would more definitive guidance from DOT/DHS be helpful? **Yes, plant security is enhanced when conditions merit additional concerns. Implementation is immediate upon notification by DHS/US Coast Guard (USCG) notification. The biggest difficulty has been the numerous agencies’ failure to coordinate their language and requirements. For instance, the USCG security plan requirements are vastly different from the DOT security plan requirements. In addition, the national threat levels are tied to DHS, while the Marine Security (MARSEC) levels are tied to the USCG. While the USCG is a part of DHS, they operate independently of DHS when assigning MARSEC levels. Oversight of all the defense agencies needs to be brought under one umbrella with consistent requirements. Instead of having two or three distinct and separate sets of actions, one agency may be able to coordinate all branches and consolidate language, reporting requirements, and responses.**
4. Have you assessed the effectiveness of different types of security measures implemented as part of your security plan? If so, what types of measures did you use and how did you make the assessment? **We critique our responses and modify future actions based on this information.**
5. Would it be useful if DOT/DHS provided guidelines or standards for security measures that would normally be expected for TIH shipments while allowing tailoring for individual circumstances or operational environments? What would the impact of requiring company certification that these guidelines or required standards are achieved? **Yes, handling of TIH materials needs to receive efficient and more secure handling. The movement of TIH shipments unfortunately leaves any facility in the hands of a carrier. If the carrier has the same certification and standards then there is no problem. The release of over the road or rail shipments basically falls into the hands of personnel who either take the same care as the chemical industry does, or falls short of the same standards and desire to only move tonnage as fast and as cost effectively as possible. Through Responsible Care®, certification can be part of the Responsible Care® audit.**
6. Should DOT/DHS require submission of security plans for TIH shipments by rail for review and approval to ensure that the plans are adequate? **No. Placing review and approval of site specific security plans in the hands of a regulatory agency would significantly increase the time required for review/approval, cause the plan to be forced into a condition that**

would dilute the specificity of the plan to the site and complicate the overall system.

IDENTIFICATION OF MATERIALS & HAZARD COMMUNICATION: On January 15, 2003 RSPA completed a study of the role placards play for transportation safety and security. The study concluded that the existing placarding system should be retained, but that DOT should continue to review the use of operational procedures and technological developments as security enhancements and as alternatives to placards in specific high-risk situations as well as for broad application. In considering potential changes to the placarding requirements as part of its continuing review, the study further concluded that DOT should consider the impact on costs, training, and international trade that could result from changes in the current placarding requirements. To continuing this review, DOT/DHS would like commenters to address the potential impacts associated with removing placards and identifying marks from rail tank cars and replacing them with some other hazard communication system.

Please provide your comments to the following questions:

1. Should identifying marks, such as distinctive paint colors or patterns and company names, be prohibited? What would be the practical impact of such a prohibition? **NO. The information on the TIH cars is of particular importance concerning the safety of the personnel involved in handling of the TIH cars. Prohibiting these marks could lead to confusion and addition more problems.**
2. If placards and other identifying marks are removed from rail tank cars transporting TIH materials, are there alternative operational procedures or systems that could simply and effectively communicate the hazards of the material to emergency response personnel and transport workers? What are the advantages and disadvantages of the alternative procedures or systems? What costs would be associated with development and implementation of such alternative procedures or systems? What security benefits would be associated with each? **In an emergency situation, time is critical. Any delay in identifying the material could cause further unnecessary damage and/or injury. An alternative system would have to render ID information to the user immediately. The current system is known and effective to provide this immediate information. Additional education would be required for major sweeping changes. This education would be available for terrorist's information gathering activities. No additional benefits would be derived. In addition, the general public is becoming more aware of what is traveling on the rails in their back yard by identification of the placards and wording on railcars. Trying to conceal what is within a railcar carrying hazardous materials from the public could cause unnecessary risk and possible harm in the event of an accident.**
3. If alternative procedures or systems are considered that would allow removal of placards and other identifying marks from rail tank cars transporting TIH materials, what should the criteria be for balancing safety and security considerations and demonstrating that

these procedures and systems are viable, practical, and workable? How secure would such systems be? Do these systems have the potential to be used maliciously to identify shipments and locations for attack? How can malicious use of such systems be prevented? **An alternative system to try and conceal TIH materials in a railcar from terrorists can provide NO balance for safety and security. Any alternative system would require training for all hazmat employees. This training could be easily obtained by terrorists. No additional benefits would be derived concerning security. However, public safety would be decreased since the general public is becoming more aware of what is traveling on the rails in their back yard by the identification of the placards and wording on railcars. Trying to conceal what is within a railcar carrying hazardous materials from the public could cause unnecessary risk and possible harm in the event of an accident.**

4. What are the impacts on emergency response of a significant change in the way the TIH hazard is communicated? How many emergency responders would be affected? What are the cost implications to the emergency response community of a change in current hazard communication requirements, including costs for new equipment and retraining? **If the identity of the materials, involved in an emergency response, is not immediately apparent the initial response will be delayed with the potential to have the situation escalate. Responders will handle these situations as a “worst case” scenario requiring maximum personal protective equipment. This fact will significantly increase the cost to equip first responders and place an unnecessary physical burden on the first responders.**
5. What are the impacts for transportation workers of a significant change in the way the TIH hazard is communicated? Do shipping documents provide sufficient information to enable transportation workers to safely handle TIH materials during the course of transportation or would some additional hazard communication mechanism be necessary? What are the cost implications to shippers and carriers of a change in current hazard communication requirements, including costs for new equipment and retraining? **Removal of markings and placards would not deter or prevent an attack. A change to shipping documents would not aid transportation workers. Most rail employees only see a consist list (i.e. manifest) of what rail cars are being shipped. A change to shipping documents would not deter a terrorist attack. Shipping documents provide sufficient information to enable transportation workers to safely handle TIH materials during the course of transportation. However, if a derailment or other emergency situation was to occur and the shipping papers not be obtainable, then emergency responders would have no way to identify the materials.**
6. Should DOT/DHS consider the removal of more specific identifying marks on rail tanks cars carrying TIH materials, but leave placards in place? What are the implications for emergency responders of such an approach? **Any rail car that is in the open is a target of opportunity. Any change that makes identification more**

difficult or time consuming represents a potential to not respond properly or in a timely fashion to a critical situation.

7. What are the potential impacts on international transportation of TIH materials of a change to U.S. requirements for communicating the TIH hazard? **Currently, DOT has additional communicating requirements in shipping TIH materials than the international community. We are more restrictive in packaging, marking, labeling and placard. Therefore, we are not longer harmonized with the rest of the world when it comes to shipping TIH materials. DOT fought the international community to increase communication of TIH shipments and lost. It would be chaos now to go back to the international community and try to change a system to “conceal” this type of shipment when we fought to increase communication methods.**
8. Do you have any additional comments on the conclusion of the DOT placarding study concerning operational and technological alternatives to placarding and its overall conclusion that the existing placarding system should be retained. (The study can be found at web site <http://hazmat.dot.gov/pubtrain/0803RedactedPlacardingReportSSI.pdf>)
No comment

Revision of the well established hazardous material transportation and safety systems would require extensive retraining and certification.

1. **The purpose of our present system is to provide information to persons directly or indirectly involved in emergency response. First responders, emergency responders, emergency support personnel, and the public use the present system to provide information about an incident. The removal of markings and placards would place all responders and personnel in a position to evacuate first, due to the lack of information available. This would be very burdensome to the affected community as well as the emergency responders.**
2. **The time required to retrain shippers and consumers will be enormous and overly burdensome. Additionally, there is no guarantee that terrorist groups would not also be trained on the changes.**
3. **A marking or placard on any form of transportation does not provide the quantity of the product in any container. There is still no indication of whether a shipping container is empty or full.**
4. **Special tracking devices or armed escorts would draw more attention to the presence of a hazard. Any policy to install tracking devices needs to consider that all containers would have to be**

configured so that a terrorist could not distinguish the difference between shipping containers.

5. Furthermore, removal of characteristic markings/placards would limit the response from entities such as CHEMTREC. They would have extreme difficulty in notifying the present manufacturers/shippers/consignees of an incident. The response to any event will limit the mitigation.
6. Any unmarked container would also lead to no other option other than to evacuate neighborhoods, highways, rail spurs, rail yards, etc., until some response agency suited up in a level A, encapsulated, SCBA equipped response equipment to sample the product and make a determination of the identity and associated hazards of an incident
7. Finally, any major derailment often has several RR cars piled together and the car markings may not be visible. The consist list provided by the railroad may not be correct after any derailment (and often is not).

SUGGESTIONS:

1. Provide each state and local entity with the funds for equipment and personnel to better respond to transportation emergencies.
2. Educate the public with information as to how to better protect themselves.

Notify through secure means any unusual shipments of extremely hazardous materials to CHEMTREC or other national response entity. This will allow for better preplanning of response needs and quicker response.

TEMPORARY STORAGE OF TIH MATERIALS IN RAIL TANK CARS

Currently the Hazardous Materials Regulations (HMR) does not address the amounts or types of hazardous materials that may be stored at one time in one location nor do the HMR limit the time that hazardous materials may be stored incidental to movement. Therefore, DOT/DHS are currently considering whether revisions to the temporary storage requirements applicable to railcars transporting TIH materials are appropriate. In this notice they are inviting commenters to address whether such revisions are appropriate and the impact they could have on the costs to transport TIH materials in addition to the impact on recipients and users (i.e. town, municipalities).

Please provide your comments to the following questions:

1. Are current security requirements applicable to the temporary storage of TIH materials sufficient? If not, what additional requirements should be considered? **Security changes have enhanced the handling of TIH shipments at fixed facilities. Current security requirements are adequate.**
2. Should DOT/DHS consider limits on the amount of TIH materials that may be stored temporarily in a single location? If so, how should such a limit be derived? Should a limit take into consideration the type and location of facility at which the materials are stored and the security features in place at the facility? How would such an aggregation limit affect the transportation of TIH materials, including transportation costs? **The locations and site security of a storage location must be considered. In cases where the TIH is a raw material, enough needs to be on hand so that production can proceed at normal rates without interruption. Any limit should be based on site security and usage rate. Putting restrictions on storage may have an economic impact on industry. Rail shipments are often not timely, and delays could be costly. The limits should not be tied to security features in place at a facility. The greater need for security is in the long stretches of countryside through which transportation moves. If changes are made to limit TIH transportation then increased costs of assuring deliveries on time will be incurred.**
3. Should DOT/DHS consider limits on the length of time that TIH materials could be stored temporarily in a single location? If so, how should such a time limit be derived? How would such a time limit affect the transportation of TIH materials, including transportation costs? **No. Most railroads are in the business of moving freight and delivery of that freight is completion of their contract to deliver for payment. Limiting storage time will unnecessarily increase the cost of moving materials. Timing of delivery, to a plant operation, is often critical and if the time limit is in place there may be insufficient material at the required location for timely delivery**
4. Should DOT/DHS develop specific criteria for facilities at which TIH materials may be stored temporarily (e.g., fencing, lighting, restricted access, security personnel, remote monitoring, and the like)? If so, what specific features would result in the greatest security benefit? Would a requirement for specific security features limit the availability of facilities at which TIH materials could be stored temporarily during transportation? If so, identify which features would limit availability and explain what the impact would be on the transportation of TIH materials, including transportation costs. **Yes, storage of TIH materials in rail yards needs additional security and lighting. Lighting is the most limiting aspect to all rail yards. When TIH rail cars are left in the dark and therefore harder to observe, then tampering is more likely.**
5. Is it feasible to prohibit the temporary storage of rail tank cars carrying TIH materials in high-population areas or in response to specific threats or threat levels? What impact would such a prohibition have on the transportation and use of TIH materials? **Continuing the movement of rail shipments is essential to timely**

delivery and limits the time rail cars of TIH materials sit in high population areas. Unfortunately most rail yards developed decades ago have been encroached by population growth and presently are surrounded by civilization.

6. Would requirements for expedited handling and delivery of TIH rail cars serve as a feasible alternative method to limit or reduce temporary storage? If so, how should “expedited handling and delivery” be defined? What would be the costs and benefits of a requirement for expedited handling and delivery? What actions can or should the Federal government take to facilitate expedited handling and delivery of TIH rail cars?
Depending on the system to expedite delivery this may be an effective means of limiting temporary storage. However, the benefit would be negated and in fact reversed, if the means of expediting delivery draws attention to the TIH car(s).

TANK CAR INTEGRITY: DOT and DHS are considering whether rail tank cars used to transport TIH materials should be modified to enhance shipment security. Modifications could include relatively simple measures to prevent tampering with valves and other accessories to more fundamental revisions to basic designs or materials of construction that would enable the tank car to withstand a terrorist attack. Commenters are encouraged to provide their comments concerning such modifications.

Please provide your comments to the following questions:

1. Are devices commercially available that could be easily installed on rail tank cars to prevent access by unauthorized persons to the contents of the tank car? Are such devices currently in use in the rail industry? How effective are such devices? What costs are associated with the installation of such devices in addition to the cost of the devices themselves—labor costs for installation, time out-of-service for the tank car, etc? Please provide the bases for cost information. **Seals are commercially available as well as other mechanical locking devices. However, these only make entry for the unauthorized person more difficult, not impossible. These offer minimal delay and or deterrence to an attacker.**
2. What are the current capabilities of rail tank cars carrying TIH materials to survive a terrorist attack? What types of attacks would be survivable? What types of attacks should be survivable? What tests have been conducted or should be conducted to determine these capabilities? **The design of pressure cars (105J's) have generally been shown to withstand impact from derailments and collisions with minimal impact to the environment. Attacks from penetrating objects, such as mortar shells or missiles are not something generally designed for and testing would be required. Rail car construction, double shelf couplers, and changes to the relief devices on rail cars have reduced the amount of dangers to the public. A well thought out attack could breach a rail car. Putting less**

opportunity to gain access to rail cars and rail track would do more to limit any terrorist damage.

3. What technology is currently available that would strengthen rail tank cars to withstand or mitigate the effects of a terrorist attack? What types of attacks would the technology protect against? Would fundamental redesign of rail tank cars be necessary or could effective modifications be accomplished through changes in construction methods or materials? Would the technology or modifications be applicable to retrofit applications as well as new construction? What types of research and development need to be conducted in conjunction with answering questions related to strengthening rail tank car design? Are there technologies developed for other purposes, such as tank car leak or breach protection, that could play a significant role in enhancing security for TIH materials in addition to or in place of strengthening rail tank cars to withstand or mitigate the effects of a terrorist attack? **No comment**
4. What are the costs and benefits of modifying rail tank cars used to transport TIH materials to increase the likelihood that they could withstand or mitigate the effects of a terrorist attack? How many tank cars would be affected? Over what period of time could such modifications be accomplished? What would be the impact of such a program on the transportation and use of TIH materials? In responding to these questions, please identify specific modifications. Please provide the bases for cost and benefit information.
If the rail industry were to modify TIH cars, they would need to modify all cars to confuse and limit terrorist activities. Any change to one commodity would only draw more attention to that commodity.

COMMUNICATION AND TRACKING: The railroad industry uses a rail car and locomotive tracking system that employs radio frequency identification tags (known in the rail industry as Automatic Equipment Identification (AEI) tags) on every freight car and locomotive in the U.S. and Canada. Railroads use AEI information for confirming train consists and are beginning to use the AEI information to identify specific cars that have been flagged by wayside equipment defect detectors. AEI tagging is the industry standard for rail cars. The railroad industry and FRA are cooperating on the development of Positive Train Control (PTC) systems. PTC systems include digital data link communications networks, positioning systems, on-board computers with digitized maps and in-cab displays, throttle-brake interfaces on locomotives, wayside interface units, and control center computers and displays. PTC systems can track the precise location of all trains and the individual cars that make up the train and will be capable of remote intervention with train operations. In addition, DHS is currently evaluating the feasibility, costs, and benefits of proposals to develop certain communication and tracking capabilities for rail hazardous materials shipments. The HMR currently do not include mandatory communication or tracking requirements for hazardous materials shipments. DOT/DHS are considering whether communication or tracking requirements should be required for rail shipments of TIH materials, such as near real-time satellite tracking of TIH railcars and real-time monitoring of tank car or track conditions. In addition, DOT/DHS are considering reporting requirements in the event that TIH shipments are not delivered within specified time periods. This notice invites commenters to address communication and shipment tracking issues associated with enhanced shipment security.

Please provide your comments to the following questions:

1. Do rail carriers currently employ other communications or tracking technology for rail shipments? What are the practical limitations of such systems? Can tracking systems be activated from remote locations? Is it feasible to employ such systems only for certain shipments or certain cars? How are such systems affected by power outages, interference, weather and geographic phenomena, or communications outages? Are there distances beyond which a communications or tracking system will not function? Are there safety or productivity benefits associated with the use of communications and tracking technology that would help offset costs? **Tracking devices have been used to track rail cars. However, these units have been subjected to damage and destruction. Most companies know the routing of their commodities and want efficient delivery of their products. Placing tracking devices on their commodities would aid the consignee as to expected deliveries. All devices (like cell phones) are limited by distance, weather, communication, and geographic conditions.**
2. Is the current system of Automatic Equipment Identification (AEI) tags and readers installed by railroads, coupled with data on the consist of trains, adaptable for wider use by government and industry in determining the approximate real-time location of TIH rail cars? How reliable and how accurate is rail car location information collected by the current system for such an application? More generally, how significant is tracking to enhancing security and what degree of tracking accuracy is optimal? **The rail carriers employ these devices at the larger rail yards and use them successfully in making a consist listing and train. However, when the rail cars are enroute or at a smaller holding yard, no tracking is done. Of course if tracking devices are employed and this technology has not been protected previously, one may assume that it is available for terrorists also. An enhanced AEI system may be helpful if it provides real time information from the time the car leaves the ship point to the time it is delivered. The system would have to have adequate safe guards so that potential terrorists do not intercept the information.**
3. Is it feasible to employ small, self-contained tracking systems on certain shipments or certain cars that provide positioning/status information only when queried from a remote location, or based on an event “tripping” a sensor? Is it feasible to employ subordinate sensor equipment on shipments or cars that can communicate with a tracking system located on a locomotive at distances potentially in excess of 1,000 feet? **Only if the system does not draw attention to specific cars. If the system flags a car as a TIH car, it would aid target identification to potential terrorists.**
4. How secure are satellite tracking and similar systems? How do rail carriers ensure that only authorized personnel have access to such information? Do these systems have the potential to be used maliciously to identify shipments and locations for attack? How can malicious use of such systems be prevented? **Any system can be infiltrated and subjected to compromise.**

5. Do or should shippers continuously monitor TIH rail car locations while they are in transportation? How do rail shippers and carriers currently address problems associated with missing or undelivered shipments? Should DOT/ DHS mandate pre-shipment coordination among shippers, carriers, and consignees? Should DOT/DHS mandate a reporting or notification system for TIH chemical shipments that are not delivered within an agreed-upon timeframe? Could such a reporting or notification system be integrated into current industry programs and practices for handling overdue shipments? **Rail carriers should monitor the location of TIH shipments. A pre-coordination would be wonderful, but it would need to be on a secure means. A system that flags late deliveries would benefit all involved parties.**
6. Are there measures or incentives that may be appropriate to consider in promoting technology development and adoption in conjunction with or separate from regulatory requirements? **No comment.**

Additional Comments on Communication & Tracking:

Unfortunately rail lines are: confined to set routes; cannot be moved easily; and, most routes now transverse through populated areas. Perhaps the changing of routing periodically of TIH rail cars would limit the well-planned events from occurring. Of course some routes may not be capable of changes.

There is no common method in place to alert communities of emergencies. Some areas/communities are used to having a weather warning radio on during adverse weather so families can seek shelter during weather related emergencies. The National Weather Service could be employed as a means to notify those households if a catastrophic rail event has occurred. Some 911 agencies now have the ability to activate weather related warnings.